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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/690,812	10/18/2000	Makoto Fujieda	1095.1139/JDH	2768

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EXAMINER	
CAO, HUEDUNG X	

ART UNIT	PAPER NUMBER
2671	

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3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/690,812	FUJIEDA, MAKOTO	
	Examiner	Art Unit	
	Huedung X Cao	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bardasz et al. (5,689,711) in view of Suzuki (5,272,642).

As per claim 1, Bardasz teaches "a three dimensional model management system for managing a three dimensional model in which relationship of subordination of individual parts is represented by a hierarchical structure," comprising:

attribute information acquiring means for acquiring attribute information and hierarchical structure information of three dimensional individual parts constituting the three dimensional model (Bardasz, figure 5, User Interface 37);

sorting means for sorting the object information acquired by said object information acquiring means in accordance with the hierarchical structure (Bardasz, builder tool 61, col. 26, lines 36-65);

display form setting means for displaying the attribute information (Bardasz, figures 24a-24b);

editing means for editing the object information sorted by said sorting means, in accordance with setting by said display form setting means (Bardasz, col. 43, lines 5-12; and col. 49, lines 22-44); and

output means for outputting the object information edited by said editing means to a display device (Bardasz, col. 49, lines 25-35).

It is noted that Bardasz does not explicitly teach that object information arranged in the hierarchical structure is "attribute information" of the object. However, Bardasz' constraint relationships which define the order or position of the object in the hierarchical structure suggests the characteristic or attribute of object as claimed. Furthermore, Suzuki teaches that in a hierarchical structure, the attribute information of the object can be used to define its position and/or order in the structure (Suzuki, figure 2, Layer table 9 includes the attribute information 18). Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, in view of the teaching of Suzuki, to configure Bardasz' system as claimed by using the attribute information, similar to Bardasz' constraint relationship information, to define the object's position in the hierarchical structure because the attribute data and constraint relationship information have the same characteristic of defining object's property.

Claim 2 adds into claim 1, wherein said editting means excludes attribute information of a predetermined part such that the predetermined part is not displayed on a display screen of the display device (Bardasz, col. 43, lines 5-42).

Claim 3 adds into claim 1, clarifying means for clarifying the attribute information acquired by said attribute information acquiring means according to attribute; wherein

said editing means refers to a result of classification by said classifying means and excludes attribute information of a part having a predetermined attribute such that said part is not displayed on a display screen of the display device (Bardasz, col. 49, lines 33-64).

Claim 4 adds into claim 1, wherein said editing means rearranges attribute information of a part at a lower hierarchical level than a predetermined hierarchical level in the hierarchical structure of the three dimensional model such that said part belongs to the predetermined hierarchical level (Bardasz, col. 43, line 5 to column 44, line 46; Suzuki, column 7, lines 25-39).

Claim 5 adds into claim 4, redefining means for redefining, as a single part, a group of parts which are defined in the three dimensional model as a plurality of parts, and for generating a new attribute information on the redefined part (Bardasz, col. 43, lines 5-42.

Claim 6 adds into claim 5, wherein said redefining means redefines a predetermined part to which a plurality of parts are subordinate at a lower hierarchy level, as a single part including said plurality of parts, and generates a new attribute information on the redefined part (Bardasz, col. 41, line 58 to col. 42, line 27).

Claim 7 adds into claim 1, specifying means for specifying predetermined attribute information displayed by the display device;

three dimensional data acquiring means for acquiring, from the three dimensional model, three dimensional data corresponding to the attribute information specified by said specifying means (Bardasz, col. 27, lines 19-41); and

facet data generating means for generating facet data, which is surface data for display, from the three dimensional data acquired by said three dimensional data acquiring means (Bardasz, col. 27, lines 41-56).

Claim 8 adds into claim 7, wherein identification information affixing means for affixing identification information indicative of normal creation to the facet data generated by said facet data generating means (Bardasz, col. 27, lines 45-56).

As per claim 9, Bardasz teaches "a computer readable recording medium recording a program for causing a three dimensional model management system to manage a three dimensional model in which relationship of subordination of individual parts is represented by a hierarchical structure," comprising:

attribute information acquiring means for acquiring attribute information and hierarchical structure information of individual three dimensional parts constituting the three dimensional model (Bardasz, User Interface 37);

sorting means for sorting the object information acquired by said object information acquiring means in accordance with the hierarchical structure (Bardasz, builder tool 61, col. 26, lines 36-65);

display form setting means for displaying the attribute information (Bardasz, figures 24a-24b);

editing means for editing the object information sorted by said sorting means, in accordance with setting by said display form setting means (Bardasz, col. 43, lines 5-12; and col. 49, lines 22-44); and

output means for outputting the object information edited by said editing means to a display device (Bardasz, col. 49, lines 25-35).

It is noted that Bardasz does not explicitly teach that object information arranged in the hierarchical structure is "attribute information" of the object. However, Bardasz' constraint relationships which define the order or position of the object in the hierarchical structure suggests the characteristic or attribute of object as claimed. Furthermore, Suzuki teaches that in a hierarchical structure, the attribute information of the object can be used to define its position and/or order in the structure (Suzuki, figure 2, Layer table 9 includes the attribute information 18). Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, in view of the teaching of Suzuki, to configure Bardasz' system as claimed by using the attribute information, similar to Bardasz' constraint relationship information, to define the object's position in the hierarchical structure because the attribute data and constraint relationship information have the same characteristic of defining object's property.

Claim 10 adds into claim 9, wherein the attribute information and the model are stored separately.

Claim 11 adds into claim 1, wherein the attribute information and the model are stored separately.

Claim 12 claims a method for managing a three dimensional model based on a system of claim 1; therefore, it is rejected for the same reason.

Claim 13 claims a system for managing a three dimensional model based on a system of claim 1; therefore, it is rejected for the same reason.

RESPONSE TO APPLICANT'S ARGUMENTS:

Applicant's arguments filed September 10, 2003 have been fully considered, but they are not deemed to be persuasive.

Applicant argues that the cited references do not teach the "attribute information of the present invention related to information about part names, authors, and creation dates in the reference to a given object". However, the specific attributes such as "part names, authors, dates, ...are not showed in the claims. The claimed "attribute information" can be interpreted as "a characteristic of an item; e.g., the item's color, size, or type" and matches the characteristic of Suzuki's object as the type of the graphic elements such as points, lines, circles, ... Applicant should include the attributes of object such as "part names, authors, dates in the claims to overcome the cited references. In the dependent claim 4, Applicant argues that the cited references do not teach "said editing means rearranges attribute information of a part at a lower hierarchical level than a predetermined hierarchical level in the hierarchical structure of the three dimensional model such that said part belongs to the predetermined hierarchical level" which is not correct. Bardasz reference shows the work on the components of a lower level effecting to the object of the higher level in column 44, lines 19-46 (figures 24a-24b); furthermore, Suzuki also teaches the editing of the components in the lower level effecting their combination in the upper level (column 7, lines 25-40). The reason for combining the Bardasz and Suzuki references is obvious because they are working on the same graphical objects in a computer system (Bardasz, column 1, lines 16-30; Suzuki, column 7, lines 40-45), having the objects

arranged in the same structure of hierarchical data base (Suzuki, figure 8; Bardasz, column 26, lines 36-65), and using the same interactive technique to manipulate and edit the objects (Suzuki, figure 1, Input processor 4; Bardasz, figure 5, User Interface 37). Accordingly, the claimed invention as represented in the claims does not represent a patentable distinction over the art of record.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Inquires

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Huedung Cao** whose telephone number is **(703) 308-5024.**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mark Zimmerman,** can be reached at **(703) 305-9798**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-0377.

Huedung Cao
Patent Examiner

MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600